Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. **(Currently Amended)** A purified preparation of a glycosylated CD44 polypeptide, said glycosylated CD44 polypeptide comprising an amino acid sequence encoded by a nucleotide sequence comprising exons 1-5, 16, 17, 18, and 20 of a human CD44 gene, wherein the CD44 polypeptide is CD44H, CD44R1, or CD44R2 wherein said glycosylated CD44 polypeptide comprises sialylated, fucosylated glycans, wherein said glycosylated CD44 polypeptide is a ligand for E-selectin, L-selectin, or both, ~~and~~ wherein the preparation comprises less than 5% of a polypeptide other than the glycosylated CD44 polypeptide, and wherein the preparation is in the form of a sterile aqueous solution, sterile aqueous dispersions, or sterile powder.

2. **(Previously Presented)** The preparation of claim 1, wherein binding of said glycosylated polypeptide to a HECA 452 antibody decreases following contacting of said glycosylated polypeptide with N-glycosidase-F under conditions sufficient to remove carbohydrate moieties from said glycosylated polypeptide.

3. **(Previously Presented)** The preparation of claim 1, wherein binding of said glycosylated polypeptide to a HECA 452 antibody decreases following contacting of said glycosylated polypeptide with sialidase under conditions sufficient to remove sialic acid moieties from said glycosylated polypeptide.

4. **(Previously Presented)** The preparation of claim 1, wherein binding of said glycosylated polypeptide to a HECA 452 antibody decreases following contacting of said glycosylated polypeptide with fucosidase under conditions sufficient to remove fucose moieties from said glycosylated polypeptide.

5. **(Canceled)**

6. **(Canceled)**

7. **(Currently Amended)** A purified preparation of a glycosylated polypeptide comprising the amino acid sequences of SEQ ID NO: 1, wherein said glycosylated polypeptide comprises sialylated, fucosylated glycans, wherein said glycosylated CD44 polypeptide is a for ligand E-selectin, L-selectin, or both and wherein the preparation comprises less than 5% of a polypeptide other than the glycosylated polypeptide.

8. **(Withdrawn)** A method for identifying a stem cell, the method comprising:

(a) contacting a test cell population with one or more agents that specifically bind to the glycosylated polypeptide of claim 1 under conditions sufficient to form a complex between said agent and stem cell, if present, in said population; and

(b) detecting said complex,

thereby identifying said stem cell.

9. **(Withdrawn)** The method of claim 8, wherein said one or more agents is an anti-CD44 antibody.

10. **(Withdrawn)** The method of claim 8, wherein said one or more agents is an antibody with the binding specificity of monoclonal antibody HECA-452.

11. **(Withdrawn)** The method of claim 8, wherein said at least one or more agents is an antibody with the binding specificity of monoclonal antibody HECA-452.

12. **(Withdrawn)** A method for identifying a stem cell, the method comprising:

(a) providing a E-selectin polypeptide immobilized on a solid phase;

(b) contacting the solid phase with a fluid sample containing a suspension of test cells wherein the relative movement between the solid phase and the fluid sample is such that shear stress is achieved at the surface of the solid phase; and

(c) observing the test cells that adhere to the solid phase

thereby identifying said stem cell.

13. **(Withdrawn)** A method for identifying a stem cell, the method comprising:

(a) providing a L-selectin polypeptide immobilized on a solid phase;

(b) contacting the solid phase with a fluid sample containing a suspension of test cells wherein the relative movement between the solid phase and the fluid sample is such that shear stress is achieved at the surface of the solid phase; and

(c) observing the test cells that adhere to the solid phase

thereby identifying said stem cell.

14. **(Withdrawn)** The method of claim 12, wherein said shear stress is greater than 0.6 dynes/cm^2.

15. **(Withdrawn)** The method of claim 12, wherein said shear stress is at least 2.8 dynes/cm^2.

16. **(Withdrawn)** The method of claim 13, wherein said shear stress is at least 10 dynes/cm^2.

17. **(Withdrawn)** The method of claim 8, 12 or 13, wherein said test cell is blood.

18. **(Withdrawn)** The method of claim 8, 12 or 13, wherein said test cell is bone marrow.

19. **(Withdrawn)** A method of isolating a stem cell from a population of cells, the method comprising:

(a) contacting a cell population with one or more agents that specifically bind to the glycosylated polypeptide of claim 1 under conditions sufficient to form a complex between said one or more agents and a stem cell, if present, in said population of cells;

(b) detecting said complex;

(c) removing said complex from said cell population, thereby isolating said stem cell from said cell population

20. **(Withdrawn)** The method of claim 19, further comprising separating said stem cell from said one or more agents, thereby disrupting said complex.

21. **(Withdrawn)** A method of isolating a stem cell from a population of cells, the method comprising:

(a) providing a E-selectin polypeptide immobilized on a solid phase;

(b) contacting the solid phase with a fluid sample containing a suspension of cells wherein the relative movement between the solid phase and the fluid sample is such that shear stress is achieved at the surface of the solid phase; and

(c) recovering the cells that adhere to the solid phase

thereby isolating said stem cell.

22. **(Withdrawn)** A method of isolating a stem cell from a population of cells, the method comprising:

(a) providing a L-selectin polypeptide immobilized on a solid phase;

(b) contacting the solid phase with a fluid sample containing a suspension of cells wherein the relative movement between the solid phase and the fluid sample is such that shear stress is achieved at the surface of the solid phase; and

(c) recovering the cells that adhere to the solid phase

thereby isolating said stem cell.

23. **(Withdrawn)** The method of claim 21, wherein said shear stress is greater than 0.6 dynes/cm^2.

24. **(Withdrawn)** The method of claim 21, wherein said shear stress is at least 2.8 dynes/cm^2.

25. **(Withdrawn)** The method of claim 22, wherein said shear stress is at least 10.0 dynes/cm^2.

26.-27. **(Canceled)**

28. **(Withdrawn)** A method of increasing the affinity of a cell for E-selectin and/or L-selectin, the method comprising

(a) providing said cell; and

(b) contacting said cell with one or more agents that increases cell-surface expression or activity the glycosylated polypeptide of claim 1 on said cell,

thereby increasing affinity of said cell for E-selectin and/or L-selectin.

29. **(Withdrawn)** The method of claim 28, wherein said cell is a stem cell.

30. **(Withdrawn)** The method of claim 28, wherein said one or more agents is a nucleic acid that encodes a CD44 polypeptide.

31. **(Withdrawn)** The method of claim 28, wherein said one or more agents is a nucleic acid that encodes a glycosyltransferase or a glycosidase polypeptide.

32. **(Withdrawn)** The method of claim 28, wherein at least one or more of said agents is a nucleic acid that encodes a glycosyltransferase.

33.-61. **(Canceled)**

62. **(Previously Presented)** The preparation of claim 1, wherein the polypeptide is CD44H.

63. **(Previously Presented)** The preparation of claim 1, wherein the polypeptide is CD44R2.

64. **(Previously Presented)** The preparation of claim 1, wherein the polypeptide is CD44R1.

65. **(Currently Amended)** A purified preparation of a hematopoietic cell E-selectin/L-selectin ligand (HCELL) peptide, wherein said HCELL polypeptide is a glycoform of CD44 that comprises sialyated, fucosylated glycans, and wherein said HCELL polypeptide is a ligand for E-selectin, L-selectin, or both, ~~wherein the preparation comprises less than 5% of a polypeptide~~

~~other than the HCELL polypeptide~~wherein the preparation is in the form of a sterile aqueous solution, sterile aqueous dispersions, or sterile powder.